



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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OFFICE OF
ECOSYSTEMS, TRIBAL AND
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October 26, 2009

Bill Van Hoesen
Department of the Army
Directorate of Public Works
IMWE-LEW-PWE
Building 2012, Liggett Avenue
Box 339500 MS 17
Fort Lewis, Washington 98433-9500

**Subject: Comments on Fort Lewis Army Growth and Force Structure
Realignment Project
EPA Project Number: 09-055-USA**

Dear Mr. Hoesen:

In accordance with our responsibilities under the Clean Air Act (CAA) §309 and the National Environmental Act (NEPA), the U.S. Environmental Protection Agency (EPA) has reviewed the US Army (USA) draft Environmental Impact Statement (EIS) for the proposed **Fort Lewis Army Growth and Force Structure Realignment Project** (CEQ# 20090318) in Kittitas, Pierce, Thurston and Yakima Counties, WA.

The draft EIS analyzes potential environmental and socioeconomic impacts associated with a proposal to implement Army stationing and training activities at Fort Lewis (86,176 acres), including the Yakima Training Center (YTC) (328,231 acres), from 2010 through 2015. The project would add up to 5,800 soldiers to existing troop levels at Fort Lewis, increase maneuver and live fire training and associated equipment, and build and renovate existing facilities and infrastructure to support increased population and training activities, while demolishing others that would no longer be needed. The EIS considered four alternatives and identified Alternative 3 as the Preferred Alternative.

EPA supports the overall goals of the proposed project to provide diverse army training to meet national security needs, while preserving and enhancing the Soldiers' and their Families' quality of life. Additionally, we appreciate the Army's significant efforts in preparing this draft EIS. Our concerns with the project as currently proposed relate to its potential significant impacts to a variety of resources including water and biological resources, noise, and cumulative effects.

Water resources

The draft EIS indicates that there are several water bodies that would potentially be affected by the project and that some of them have been listed as water quality impaired on the state of Washington's 303(d) list. Listing parameters include pH, temperature, dissolved oxygen, fecal coliform bacteria, phosphorus, and pesticides. We are concerned that planned activities under the Preferred Alternative, such as construction of additional facilities and intensified use of

live-fire and maneuver training and associated equipment use could further degrade water quality with respect to those parameters. We believe that the NEPA analysis should include additional specific information about water quality and management actions that would improve water quality. The EIS, for example, identifies the pollutants affecting various water bodies, but does not indicate the magnitude of water quality standard exceedances and Army actions to meet water quality standards. We recommend the Army work with Washington State Department of Ecology (Ecology) to develop water quality restoration plans for waters that do not currently have such plans, and to implement existing plans to meet State and Federal water quality rules and regulations.

The draft EIS notes that most surface water on Fort Lewis would also be discharged into Puget Sound, which is sensitive and vulnerable to water quality and habitat impacts. As an active member of the Puget Sound Partnership, EPA strongly supports the strategic priorities that have been established to protect and restore this important resource. Because of that, we encourage the Army to partner with others involved in Puget Sound restoration programs to ensure coordination of ecosystem restoration activities. We also note that, under the federal Clean Water Act (CWA), any construction project disturbing one or more acres requires a construction storm water discharge permit or National Pollutant Discharge Elimination System (NPDES) permit for discharges to waters of the U.S. The final EIS should document the project's consistency with applicable storm water permitting requirements and should discuss specific mitigation measures that may be necessary or beneficial in reducing adverse impacts to water quality.

In our scoping comments in February 2009, we indicated that construction of facilities and cantonment developments could compact the soil, thus changing hydrology, runoff characteristics, and ecological function of the area, affecting flows and delivery of pollutants to water bodies. The EIS does not describe in sufficient detail sediment loadings to impaired streams during construction and maneuver training. Are stream crossings going to impact any stream with sediment? How effective would any proposed best management practices be in protecting the streams and aquatic resources, particularly fisheries? Do crossings at certain times of the year result in more impacts than others? The final EIS should discuss impacts due to stream crossings. The EIS should also document locations where stream fording and crossing within the Installations with wheeled and tracked vehicles have been approved, and if articulating concrete mats are used to harden low-water crossing sites along tank trails.

The draft EIS describes wetlands on both Installations and explains that they would suffer no significant impacts due to the proposed action. It is not clear where the wetlands are, their size, and the extent to which wetlands and associated riparian areas would be impacted by the project. Will there be loss of riverine and riparian habitat important to fish and other species? How will the project comply with Clean Water Act (CWA) Section 404 requirements? The final EIS should discuss in detail the impacts to wetlands and riparian areas, describe the impacts and associated mitigation measures in quantitative and functional terms. We also recommend the inclusion of a detailed discussion of the cumulative effects from this and other projects on the hydrologic conditions of the proposed project area, including wetlands.

The project proposes new construction activities that would expand impervious surfaces, resulting in greater stormwater volumes and potentially higher pollutant loading to nearby waterways and floodplains. Even though current surface water drainage and retention systems at the Installations would lessen the impacts of stormwater runoff from impervious surfaces, pollutants are still likely to accompany discharge to surface waters and infiltrate to ground water.

We recommend use of Low Impact Development (LID) techniques that reduce the volume of stormwater and mimic natural conditions as closely as possible. More information about LID practices can be found online at: http://www.psat.wa.gov/Programs/LID/lid_cd/brochure.pdf and <http://www.epa.gov/smartgrowth/stormwater.htm>.

Sole source drinking water protection

The draft EIS should address any potential effects to groundwater resources at Ft. Lewis and YTC from the proposed action, and indicate measures to be taken to ensure protection of groundwater quality as the project is implemented. Please note that the groundwater resources at Ft. Lewis lie within the Central Pierce County Aquifer that EPA designated as a Sole Source Aquifer (see <http://yosemite.epa.gov/r10/water.nsf/Sole+Source+Aquifers/SSA>) due to concerns about potential contamination risks. In order to better analyze potential impacts to this sole source aquifer and aquifers at YTC, the final EIS needs to include information about water level elevation contours of the area, cross sections depicting aquifer stratigraphy and water level depth, maps of any contaminant plumes known to exist in the area and plume(s) likely to be transported to a deeper part of the aquifer systems, ground water flow directions, hazardous materials sites, and locations of existing wells and a description of the anticipated impacts on the wells and on the wellhead protection areas. In particular, EPA is concerned that in some areas of Yakima County, nitrate levels in well water are in excess of the state drinking water maximum contaminant level (MCL) of 10 mg/L. If information is available, please include the most current test results for nitrates and other contaminants in well water at the installations.

Because of concerns that water within the aquifers may exceed drinking water quality standards, we recommend the Army to coordinate with appropriate State and Federal agencies with programs addressing the aquifer issues to ensure their protection, and to partner with the agencies' ongoing aquifer habitat and water flow and quality studies to better understand the complex aquifer and river interchange relationships. Please note that some projects receiving federal financial assistance are subject to EPA review and approval that the project would not be a hazard to public health through contamination of ground/drinking water.

Hazardous materials and waste

Executive Order 13423 (*Strengthening Federal Environmental, Energy, and Transportation Management*) requires the Army to reduce the quantity of toxic and hazardous chemicals acquired, used, or disposed of. The Department of Defense (DoD) assessments of enterprise risk have identified several emerging contaminants¹ suggested for watching and action. These contaminants have the potential for adverse health effects on soldiers, employees, and the public. They may also reduce training/readiness; restrict use of ranges; increase operation, maintenance, and cleanup costs, thus diverting important resources from mission needs. The EIS should discuss emerging contaminants e.g., perchlorate, RDX, and nitroglycerin, (NG) and how they may pose human health and environmental risks. This is particularly important at Fort Lewis where site contamination has led to the listing of some areas of Ft. Lewis on the National Priorities List (NPL), as well as NPL listing at the adjacent McChord AFB installation (p. 3-7). Also, there are emerging hazardous substances sites where the soil berms serve to accumulate spent small arms ammunition projectiles, such as lead and tungsten. Over

¹ Answering DoD's emerging contaminant challenges, online at: http://www.fedcenter.gov/kd/go.cfm?destination=ShowItem&Item_ID=7404.

time, the toxics could accumulate into concentrations that would threaten surface and ground water supplies, requiring costly cleanup.

We are concerned about the project potential to mobilize contaminants currently in soils and impacts to ongoing and planned remedial actions for the contaminated sites. The project could exacerbate water quality problems within listed water bodies, resulting in impacts to aquatic life and fish. Specifically, Alternative 3 would increase the quantities of hazardous materials used and generated during construction and training activities (p. 4-141).

We recommend that the Army coordinate with Ecology and EPA as contaminated sites are identified and cleanup plans are developed and implemented to minimize impacts resulting from possible release of hazardous materials in the environment and disturbance of contaminated sites. The final EIS should include detailed information regarding specific measures that will be taken to reduce impacts of potential release of emerging contaminants and toxic hot spots in the environment and disturbance of contaminated sites by the project. As an example, the final EIS could include information addressing Spill Prevention, Control, and Countermeasure (SPCC) plans for the project, DoD directive no. 4715.11 and technologies that could be used to minimize or eliminate concerns about explosives safety and related hazardous materials. For example, use of shock-absorbing concrete (SACON).

Impacts to biological resources

The draft EIS indicates that Alternative 3 actions would result in long term loss or degradation of unique high quality plant communities on an area up to 110 acres. We appreciate the inclusion of a draft Biological Assessment for the project and efforts to work with the Washington Department of Fish and Wildlife, US Fish and Wildlife Service and National Oceanic and Atmospheric Administration to determine the extent of impacts to individual species and design appropriate mitigation measures to reduce impacts to the species and their habitats, especially loss of the shrub-steppe vegetation and prairies due to fire, construction and training activities. We recommend the final EIS include the outcomes of consultations with the agencies and specific measures recommended to protect species and habitats that would be impacted.

Air quality impacts

The draft EIS describes current air quality conditions at Fort Lewis and YTC. We appreciate data provided, including discussions of potential climate change impacts. Air quality may also be impacted due to invasive plant treatment activities, dust from road construction and site operations, regular traffic on dirt roads, emissions from vehicles, and cumulative impacts from surrounding activities such as agriculture and fire. Since Fort Lewis and YTC and surrounding areas may include sensitive populations such as the elderly and children, it will be important to monitor air quality and take corrective action if air quality standards are not met. Monitoring strategies should be tailored to local conditions because localized air quality impacts can be substantial, even though area-wide and/or long term monitoring may show compliance with air quality standards. That is particularly important with regard to Fort Lewis because EPA has designated parts of Pierce County as nonattainment for 24-Hour PM_{2.5} Standards (see <http://www.epa.gov/pmdesignations/2006standards/final/region10.htm>).

Noise

The draft EIS states that the Army conducted a noise study in February 2009 under the Grow the Army Plan. Please provide a summary of the results of this study and if possible present data for all alternative actions on the same table to help reviewers compare differences in the size of the area affected by the project by each alternative. Additionally, the final EIS should include data for the differences in number of homes along with people living in them affected by each alternative and caliber noise zones. Of particular importance would be off-Post residences/residents that would be affected.

Because noise impacts would be significant, there are other noise attenuation measures that could be implemented in addition to establishing a board. We believe that:

- Noise from stationary construction equipment can be reduced at the source through shielding constructed around the equipment.
- All mobile equipment should be turned to manufacturers' specifications for optimal noise attenuation e.g., mufflers.
- The noise complaint line should also remain active and notification of significant noise events given to surrounding residents, especially when noise activities are not usually restricted.
- Spot noise monitoring inside and outside the nearest affected residences should be considered during average day and noisy missions events during all seasons, particularly in winter when leaf cover may be absent. This would provide data to consider when designing noise mitigation.
- Home soundproofing can also provide noise relief inside homes, as well as use of earthen berms and evergreen tree cover between noise sources and nearby receptors.

Coordination with Tribes

The draft EIS indicates that the planning team met with tribes that may be affected by the project, but information related to issues discussed and outcomes of the meetings was not included in the draft EIS. We recommend the final EIS include that missing information and a discussion on how any issues raised would be addressed. Because the draft EIS indicates that tribal resources could be impacted by the project, it is important that the Army work closely with affected tribes to address those impacts and document measures that would be taken to avoid or reduce impacts to cultural resources.

Monitoring

The proposed project has the potential to impact a variety of resources repeatedly over time. As a result, we recommend that the project be designed to include an environmental inspection and mitigation monitoring program to ensure compliance with all mitigation measures and assess their effectiveness. The EIS document should describe the monitoring program and how it will be used as an effective feedback mechanism so that any needed adjustments can be made to the project to meet environmental objectives during the project operation and maintenance.

Alternatives

The EIS analyzes four action alternatives based on the number of soldiers and their families, facilities to be constructed or modified, training intensity, and annual maneuver miles.

Alternative 1 is a No Action and is considered as the benchmark to compare the magnitude of effects of the remaining three alternatives. It is not clear whether current troop levels at Fort Lewis are being considered. It is also not clear whether Alternative 2 includes the number of soldiers already included in previous decisions.

Based on information presented in the draft EIS, we have assigned a rating of EC-2 (Environmental Concerns – Insufficient Information) to the Preferred Alternative. This rating and a summary of our comments will be published in the Federal Register. A copy of the rating system used in conducting our review is enclosed for your reference.

Thank you for the opportunity to review this draft EIS. If you have questions or comments concerning our review, please contact Theo Mbabaliye at (206) 553-6322, or me at (503) 326-2859.

Sincerely,

/s/

Teresa Kubo, Acting Manager
Environmental Review and Sediment
Management Unit

Enclosures

cc: EPA Washington Operations Office
Washington Department of Ecology
Washington Department of Fish and Wildlife